

COLLEGE READINESS



ACT[®]

2005 STATE REPORT

The State of College Readiness and Success in Tennessee

National Results

Improving college readiness is crucial to the development of a diverse and talented labor force that is able to maintain and increase U.S. economic competitiveness throughout the world. How can we help to ensure that more of our students are ready to make the most of the college experience?

ACT research shows that too few members of the graduating class of 2005 are ready for college-level work—or for the workplace, where the same skills are now being expected of those who do not attend college. Sixty-eight percent of ACT-tested 2005 high school graduates met ACT's College Readiness Benchmark for college English Composition; 41 percent met the Benchmark for college Algebra; 51 percent met the Benchmark for reading (indicating a high probability of success in first-year college social-science courses); and 26 percent met the Benchmark for college Biology. Similar results were observed among both males and females and among all racial and ethnic groups. And, at present, it does not look as though students already in the pipeline are likely to fare much better.

ACT research suggests a number of solutions to the problem of improving college readiness and, thereby, of making all students ready to succeed once they reach college. Our research shows that a strong positive relationship exists between the amount and kind of high school coursework students take and their readiness for college. The more courses students take and the more challenging those courses, the more likely these students will be college ready and will persist to a college degree. Certain specific courses—such as Biology, Chemistry, Physics, and upper-level mathematics courses beyond Algebra II—have a startling effect on student performance and college readiness.

Furthermore, our research also shows that the ability to comprehend complex texts is the clearest differentiator between students who are ready for college-level reading and those who are not.

Tennessee Results

Important information concerning the current state of college readiness and success of Tennessee's students is highlighted in the following pages. We also provide a number of steps that educators and policymakers can take to improve college readiness in Tennessee.

Tennessee's Participation in the ACT

The following findings are based on the performance of Tennessee's students who took the ACT[®]. For Tennessee, this represents a subgroup of the total high school graduating class. The ACT participation rate is an indicator of the extent to which students are encouraged to consider, and are provided opportunities to prepare for, postsecondary education.

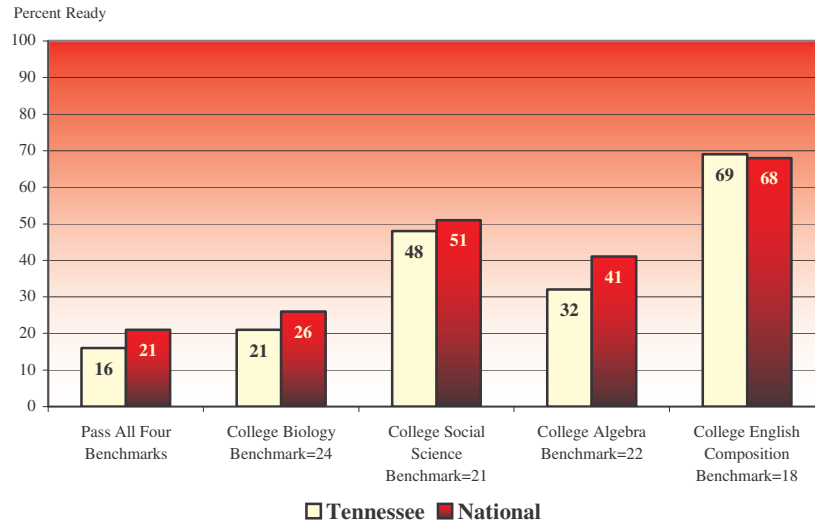
In 2004–2005, approximately **44,000** high school graduates in Tennessee took the ACT, a figure representing about **92 percent** of the Tennessee graduating class of 2005. Following are the college readiness results for these ACT-tested graduates, accompanied in many cases by the national results as a basis for comparison.*

Analysis of National and Tennessee College Readiness

- 1. Nationally, many high school students are still not ready for either college or work.**
 - **Based on the 2005 ACT-tested Tennessee high school graduates, between 21 and 69 percent have met at least one of ACT's College Readiness Benchmarks.** Only 21 percent of ACT-tested Tennessee high school graduates met ACT's College Readiness Benchmark in Science demonstrating their readiness for their first credit-bearing college course in Biology, based upon the 2005 results of the ACT. Just 32 percent are ready for their first course in college Algebra, 48 percent are ready for entry-level social-science courses, and, while better, still only 69 percent are ready for college coursework in English Composition. In addition, 16 percent met all four Benchmarks. Most of the Tennessee college readiness percentages are less than those seen nationally.

* Throughout this document, some data may be missing due to the lack of sufficient numbers of students on which to base reliable conclusions.

2005 ACT-tested High School Graduates Meeting College Readiness Benchmarks



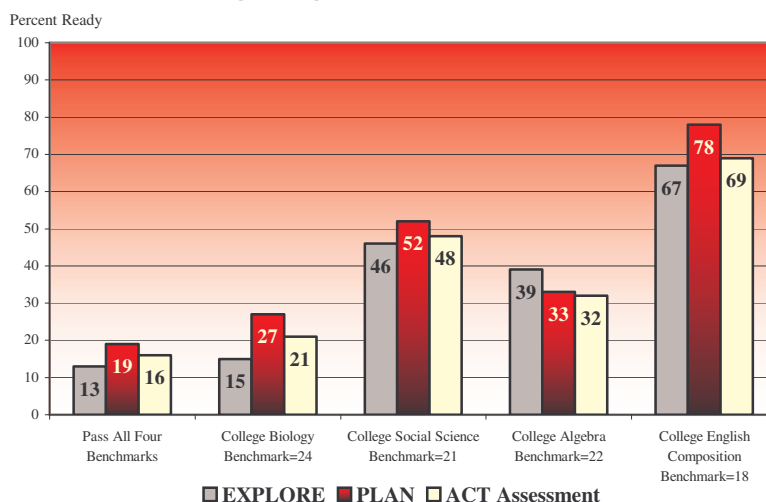
- The average ACT Composite score of Tennessee high school graduates has increased slightly in five years. The table below shows the average ACT Composite scores for students in Tennessee for each year since 2001. These scores suggest that Tennessee students are making some progress at becoming college and work ready.

ACT Composite Score 5-Year Trend Table

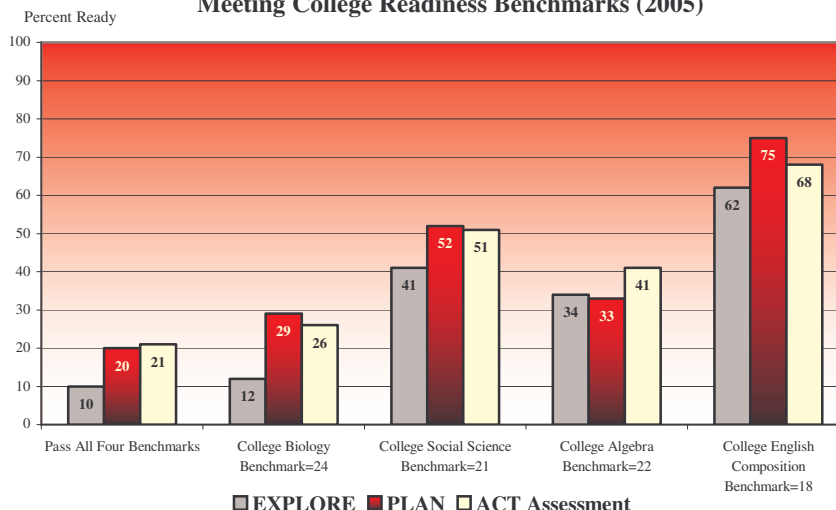
Cohort	2001	2002	2003	2004	2005
National	21.0	20.8	20.8	20.9	20.9
Tennessee	20.0	20.0	20.4	20.5	20.5

2. Nationally, although some students already in the college preparation pipeline are on track to being ready for college and work by the time they graduate from high school, we need to intervene now to ensure that even more are ready.
 - The students in Tennessee who took EXPLORE or PLAN and comprise the classes of 2007 and 2009 still have a way to go to be ready for college and work. In 2005, approximately 12,900 Tennessee eighth-graders took EXPLORE and 25,900 tenth-graders took PLAN, programs designed to address college and work readiness at an early stage. The pattern of percentages of Tennessee's eighth- and tenth-graders demonstrating likely readiness for college coursework in 2007 and 2009 is consistent with those seen nationally, as shown in the two figures below.

Tennessee EXPLORE-, PLAN-, and ACT-tested Students Meeting College Readiness Benchmarks (2005)



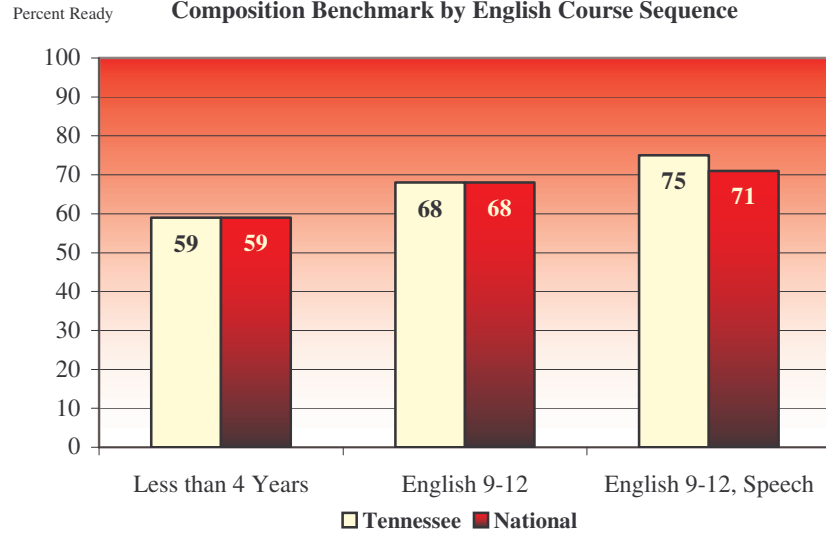
National EXPLORE-, PLAN-, and ACT-tested Students Meeting College Readiness Benchmarks (2005)



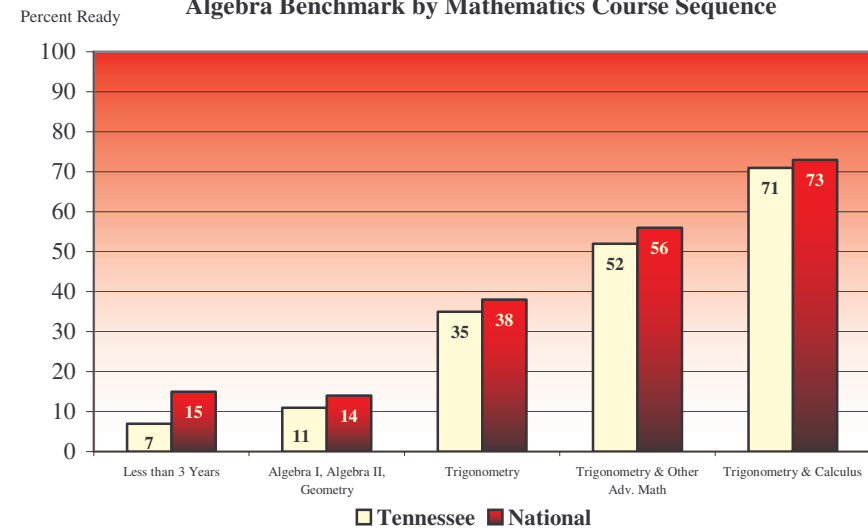
3. **ACT results show the benefits of taking the core curriculum. But they also show the even greater benefits accrued by Tennessee students who take *more* than the core curriculum.**

Even if Tennessee students take the minimum number of courses as defined by the core curriculum, it will not necessarily guarantee that they are college ready. While taking a core curriculum certainly helps students raise their level of academic preparation and meet high school graduation requirements, it does not necessarily mean that a student is ready for college-level work. Obviously, the rigor of these courses is a strong determiner in preparing students for college and work. But, as the following figures show, Tennessee students who took one or more courses beyond core met or exceeded the College Readiness Benchmarks in markedly greater percentages than students taking only core.

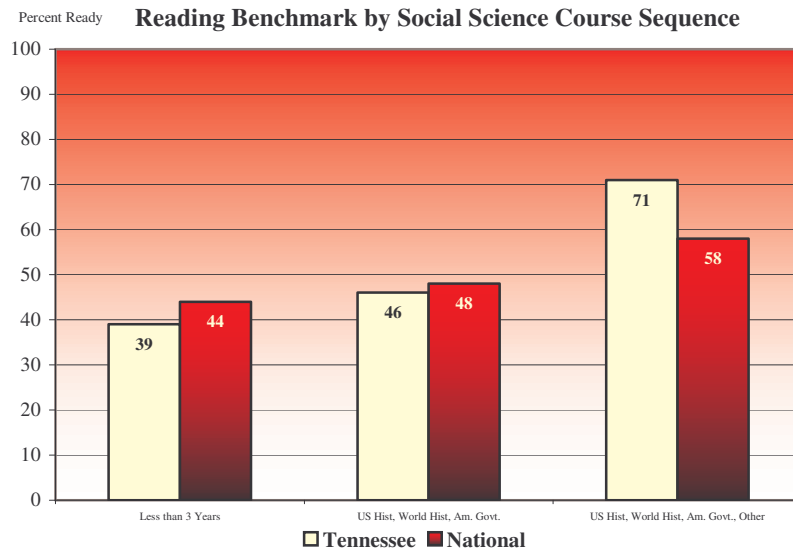
2005 ACT-tested High School Graduates Meeting College English Composition Benchmark by English Course Sequence

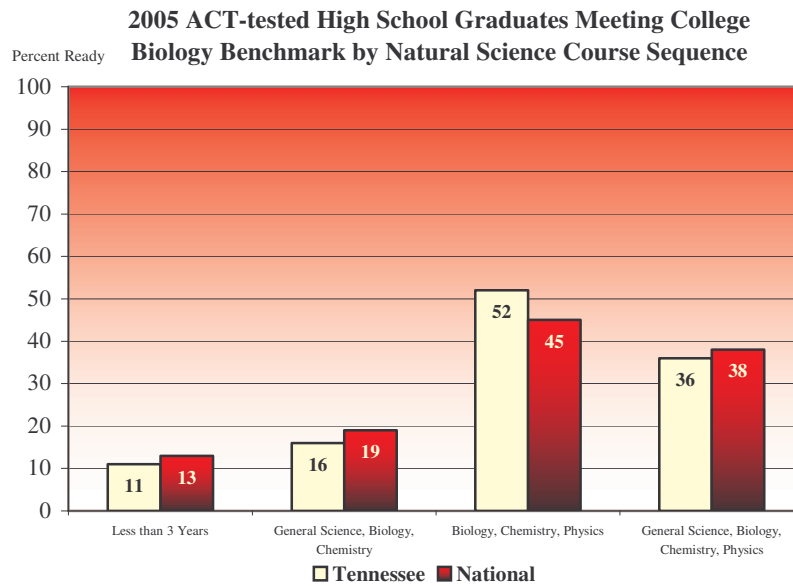


2005 ACT-tested High School Graduates Meeting College Algebra Benchmark by Mathematics Course Sequence






2005 ACT-tested High School Graduates Meeting College Reading Benchmark by Social Science Course Sequence





- Tennessee students gain from taking more rigorous courses *regardless* of their achievement level.** The average score increase for Tennessee students who take additional science courses beyond Biology is 3.2 score points on the Science Test, and on the Mathematics Test is 5.8 score points for students who take additional mathematics courses beyond Algebra I, Algebra II, and Geometry. And these are substantial gains since the ACT score scale is 36 points. These gains hold true for all students, low achievers as well as high achievers.

Value Added by Science Courses When Achievement is Controlled		
Course Sequence	Tennessee Average ACT Science Score	Cumulative Value Added by Course in Tennessee
Biology, Chemistry, Physics	21.4	
		3.2
Biology, Chemistry	19.5	
		1.3
Biology Only	18.2	

Value Added by Mathematics Courses When Achievement is Controlled		
Course Sequence	Tennessee Average ACT Mathematics Score	Cumulative Value Added by Course in Tennessee
Calculus	24.2	
		5.8
Trigonometry	22.0	
		3.6
Other Advanced Math	20.7	
		2.3
Algebra I, II, Geometry	18.4	

In summary, what does this mean? Tennessee students who take a minimum core curriculum are more likely to be ready for college-level work than are students who do not take the core. But Tennessee students who take rigorous courses beyond the recommended minimum number of core courses—including courses that require students to comprehend challenging, complex reading materials—are even more likely to be ready for college. And Tennessee students whose beyond-core coursework includes courses in advanced mathematics beyond Algebra II (such as Trigonometry), as well as Biology, Chemistry, and Physics, are *likeliest of all* to be college ready. And this is true of students at all levels of achievement, not just the high achievers.

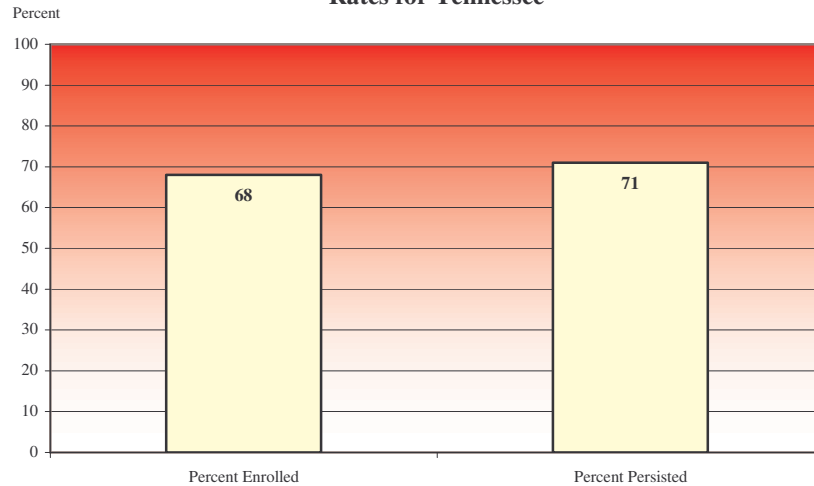
Analysis of National and Tennessee College Success

1. Overall, a significant percentage of Tennessee students enroll in college directly after high school and a majority of students tend to return to college in the second year.

- A high percentage of Tennessee students tend to enroll in college and stay in college.

Following are the percentages of 2003 Tennessee high school graduates who enrolled in a postsecondary institution in Fall 2003, as well as the percentage who returned in Fall 2004 for a second year at the same institution.

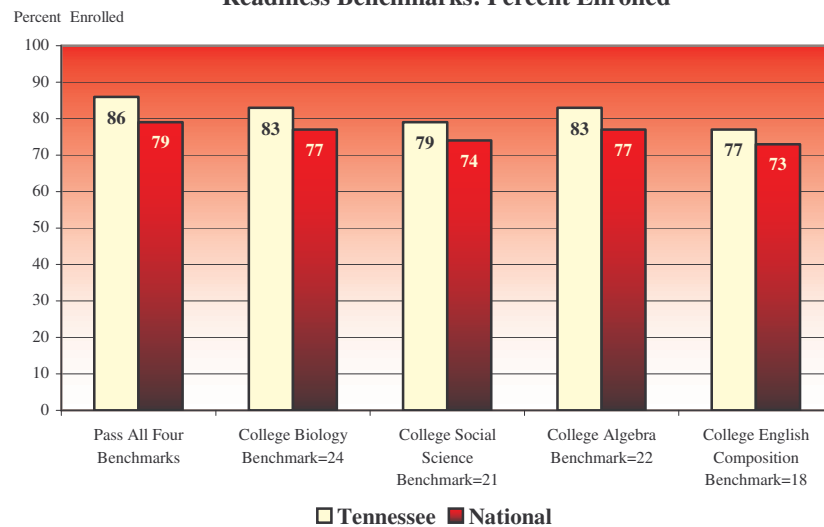
2003 High School Graduate College Enrollment and Persistence Rates for Tennessee



- A high percentage of Tennessee's students who meet the ACT College Readiness Benchmarks are enrolling in college.

The next figure shows the percentages of 2003 Tennessee high school graduates who met one or all of ACT's College Readiness Benchmarks and enrolled in a postsecondary institution in Fall 2003. Note that a high proportion of Tennessee's college-ready students are, in fact, enrolling in college.

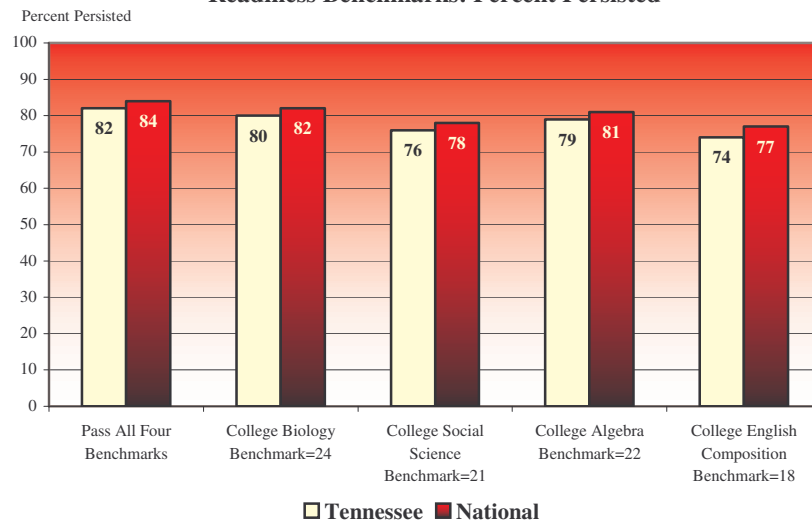
2003 Tennessee High School Graduates Meeting ACT College Readiness Benchmarks: Percent Enrolled



- **A high percentage of Tennessee students who are ready for college tend to return to college their sophomore year.**

The following figure shows the percentages of 2003 Tennessee high school graduates who met one or all of ACT's College Readiness Benchmarks and returned in Fall 2004 for a second year at the same institution. Note that a high proportion of Tennessee's college-ready students are continuing on to a second year of college. This means that the better prepared students are for college, the more likely they are to enter college and stay in college.

2003 Tennessee High School Graduates Meeting ACT College Readiness Benchmarks: Percent Persisted



Summary

Something can be done to help each and every student in Tennessee become ready for college. Based on the 2005 ACT-tested high school graduates in Tennessee:

- **Approximately 1 in 6 of Tennessee students *are ready for college and work*.** Sixteen percent of the ACT-tested students in Tennessee met or exceeded all four College Readiness Benchmarks. These students likely entered high school with the requisite foundational skills, took rigorous courses, worked hard in those courses, and are now ready to enter college and work.
- **Just over half of Tennessee students *are nearly ready for college and work*.** About 56 percent of the ACT-tested students in Tennessee met one, two, or three of the benchmarks but did not meet all four. By doing just a little bit more—taking an additional math course beyond Algebra II, taking Chemistry and Physics in addition to Biology, taking courses that require challenging reading—they will be much better prepared to succeed in college or work.

- **Approximately 3 in 10 of Tennessee’s students *are not yet, but could be, ready for college and work.*** We estimate that there are still far too many of Tennessee’s students—28 percent who took the ACT and did not meet any of the benchmarks—who are not ready for college or work. These students likely lack the foundational skills when they enter high school and need to be identified for intervention much earlier, certainly before middle school, so that they can strengthen their foundational skills.

Action Plan for Tennessee

1. Create a Common Focus.

- Establish collaborative partnerships between secondary and postsecondary educators and business to come to a shared understanding of what students need to know for college and workplace readiness.
- Align postsecondary core course requirements with state core course requirements.
- Use a common language in K-16 education that communicates postsecondary expectations to the high school classroom level.

2. Establish High Expectations for All.

- Identify and communicate the need for all students to meet rigorous state standards so that all high school graduates are prepared for college-entry courses and the workplace without remediation.
- Connect higher education performance expectations to state readiness indicators that can be used to monitor progress.

3. Require a Rigorous Curriculum.

- Establish core course requirements.
- Review and evaluate the rigor and alignment of courses offered in high school in English, mathematics, social studies, and science to ensure that the foundational skills leading to readiness for college-level work are taught, reaffirmed, and articulated across courses.
- Encourage all high school students to take specific rigorous courses that include: one or more advanced mathematics courses beyond Algebra II (e.g., Trigonometry); and Biology, Chemistry, and Physics.
- Incorporate complex reading materials into all courses, not just English and social studies courses; students must have the opportunity to read such materials across the curriculum so that they are better positioned to comprehend complex texts in all subjects once they enter college or the workplace.
- Continue reading instruction in all high school grades so that students can build upon the foundational reading skills they have developed before high school.

4. Provide Student Guidance.

- Engage all students in early college and career awareness.
- Help students set high aspirations.
- Help ensure that students plan a rigorous high school coursework program.
- Help students identify and explore postsecondary educational and workplace training options.
- Increase college outreach efforts.

5. Measure and Evaluate Progress.

- Monitor and measure every student's progress early and often using college readiness assessments.
- Measure student progress in meeting College Readiness Benchmarks beginning at least in the eighth grade and continuing throughout high school.
- Make timely interventions with those students who are not making adequate progress in meeting the College Readiness Standards.
- Provide early indicators of student readiness for college admission and course placement.
- Provide feedback to schools based on their graduates' readiness and success in college.